UNITED STATES PATENT AND TRADEMARK OFFICE

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte MICHELE L. BANKO, KRZYSZTOF KOPERSKI,
JISHENG LIANG, ANIRUDDHA GADRE, and
CHRISTOPHER J. BARROWS[1]

_____

Appeal 2016-006988
Application 12/758,690
Technology Center 3600

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Before ST. JOHN COURTENAY III, ERIC S. FRAHM, and
JOHN P. PINKERTON, *Administrative Patent Judges*.

PINKERTON, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134(a) from the Examiner's
Final Rejection of claims 1–29, which constitute all of the claims pending in
the application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

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[1] Appellants identify VCVC III LLC as the real party in interest. App. Br. 1.

STATEMENT OF THE CASE

Introduction

Appellants state that the described invention relates "to methods and systems for targeting advertisements using semantic techniques or by recognizing popular entities or products." Spec. ¶ 1.[2]

Claims 1 and 12 are representative and reproduced below (with the disputed limitations *emphasized*):

> 1.　　An automated method in a computing system for targeting advertisements to online content, comprising:
>
>　　　under control of the computing system having an associated display screen, the computing system configured to target advertisements to online content, by automatically;
>
>　　　　from an analysis of online content, determining a particular entity whose popularity has changed in a designated amount of time;
>
>　　　　*determining whether the particular entity is a product or is not a product*;
>
>　　　　*in response to determining that the particular entity is not a product*, determining one or more products that relate to the particular entity and causing advertisements relating to the one or more of the determined one or more products that relate to the particular entity to be presented on the display screen in conjunction with online content that relates to the particular entity; and

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[2] Our Decision refers to the Final Action mailed June 12, 2015 ("Final Act."); Appellants' Supplemental Appeal Brief filed Dec. 19, 2015 ("App. Br.") and Reply Brief filed July 6, 2016 ("Reply Br."); the Examiner's Answer mailed May 6, 2016 ("Ans."); and the Specification filed Apr. 12, 2010 ("Spec.").

*in response to determining that the particular
entity is a product,* determining one or more keywords that
relate to the particular entity and causing advertisements to be
associated with the one or more keywords such that one or
more of the associated advertisements are presented on the
display screen in conjunction with online content that relates to
the determined one or more keywords.

12.   An online computing environment, comprising:

a semantic keyword recommender, stored in one or more
computer memories, and configured, when executed, to:

receive one or more indications of products;

*automatically determine one or more entities
related to the received product indications* and generate a
scored list of one or more entities for use as keywords;

automatically determine one or more categories
related to the received product indications and generate a scored
list of categories for use as keywords;

automatically determine zero or more related terms
related to the received product indications through semantic
analysis of content that determines the zero or more related
terms by finding terms related to at least one determined
category that is related to the received one or more indications
of products; and

automatically generate a plurality of keywords for
associating with online advertisements that correspond to the
scored list of one or more related entities, the scored list of
one or more related categories, and the determined zero or more
related terms and return indications of the generated keywords; and

an electronic advertisement payment system that utilizes
the generated keywords to make available one or more online
advertisements.

App. Br. 26, 28 (Claims App'x).

Rejections on Appeal

Claims 1–29 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1–11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rao (US 8,069,160 B2; issued Nov. 29, 2011) and Scholl et al. (US 7,752,200 B2; issued July 6, 2010) ("Scholl").

Claims 12–17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Zeng et al. (US 2005/0234879 A1; published Oct. 20, 2005) ("Zeng"), Yoo et al. (US 7,146,416 B1; issued Dec. 5, 2006) ("Yoo"), and Chang et al. (US 2008/0256059 A1; published Oct. 16, 2008) ("Chang").

Claims 18–29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Scholl and Yoo.

ANALYSIS

We have reviewed the Examiner's rejections in light of Appellants' arguments in the Briefs. For the reasons discussed *infra*, we are persuaded by Appellants' arguments that the Examiner erred in rejecting claims 1–11 and 20–29 under 35 U.S.C. § 103(a); we are not, however, persuaded by Appellants' arguments that the Examiner erred in rejecting claims 1–29 under 35 U.S.C. § 101 and claims 12–19 under 35 U.S.C. § 103(a).

Rejection of Claims 1–29 under § 101

Under 35 U.S.C. § 101, an invention is patent-eligible if it claims a "new and useful process, machine, manufacture, or composition of matter."

35 U.S.C. § 101. The Supreme Court, however, has long interpreted § 101
to include an implicit exception: "[l]aws of nature, natural phenomena, and
abstract ideas" are not patentable. *See, e.g., Alice Corp. Pty Ltd. v. CLS
Bank Int'l*, 134 S. Ct. 2347, 2354 (2014).

The Supreme Court, in *Alice*, reiterated the two-step framework
previously set forth in *Mayo Collaborative Services v. Prometheus Labs.,
Inc.*, 132 S. Ct. 1289, 1300 (2012), "for distinguishing patents that claim
laws of nature, natural phenomena, and abstract ideas from those that claim
patent-eligible applications of those concepts." *Alice Corp.*, 134 S. Ct. at
2355. The first step in that analysis is to "determine whether the claims at
issue are directed to one of those patent-ineligible concepts," *id.*, e.g., to an
abstract idea. For example, abstract ideas include, but are not limited to,
fundamental economic practices, methods of organizing human activities, an
idea of itself, and mathematical formulas or relationships. *Id.* at 2355–57. If
the claims are not directed to patent-ineligible concept, the inquiry ends.
Otherwise, the inquiry proceeds to the second step where the elements of the
claims are considered "individually and 'as an ordered combination'" to
determine whether there are additional elements that "'transform the nature
of the claim' into a patent-eligible application." *Alice Corp.*, 134 S. Ct. at
2355 (quoting *Mayo*, 132 S. Ct. at 1297–98).

The Court acknowledged in *Mayo*, that "all inventions at some level
embody, use, reflect, rest upon, or apply laws of nature, natural phenomena,
or abstract ideas." *Mayo*, 132 S. Ct. at 1293. We, therefore, look to whether
the claims focus on a specific means or method that improves the relevant
technology or are instead directed to a result or effect that itself is the
abstract idea and merely invoke generic processes and machinery.

Here, in rejecting the claims under 35 U.S.C. § 101, the Examiner finds that claims 1–29 are directed to displaying advertisements associated with products or keywords, which is a fundamental economic practice and, therefore, an abstract idea. Final Act. 2; *see also* Ans. 11. The Examiner also finds

> [t]he claims do not include limitations that are "significantly more" than the abstract idea because the claims do not include an improvement to another technology or technical field, an improvement to the functioning of the computer itself, or meaningful limitations beyond generally linking the use of an abstract idea to a particular technological environment.

Final Act. 2; Ans. 11–12.

Appellants argue that the Examiner has failed to make a prima facie case of unpatentability because "the Examiner has not provided <u>any</u> evidence supporting the allegation that the claim language of each independent claim is directed to an abstract idea." App. Br. 11. There is, however, no requirement that the Examiner provide any such evidence in order to make a prima facie case under §101. Instead, the Federal Circuit has held that the USPTO carries its procedural burden of establishing a prima facie case when its rejection satisfies the requirements of 35 U.S.C. § 132 by notifying the applicant of the reasons for rejection, "together with such information and references as may be useful in judging of the propriety of continuing the prosecution of [the] application." *See In re Jung*, 637 F.3d 1356, 1362 (Fed. Cir. 2011). Here, in rejecting claims 1–29 under § 101, the Examiner notified Appellants of the reasons for the rejection "together with such information . . . as may be useful in judging of the propriety of continuing the prosecution of [the] application." 35 U.S.C. § 132. Although

Appellants also argue the Examiner failed to make a prima facie case by not addressing the language of each independent claim (*see* App. Br. 13), we note the Examiner did address each independent claim in the Answer. Ans. 11–12. Thus, we find that the Examiner set forth a prima facie case of unpatentability.

Appellants argue that, although the independent claims "may involve advertising, that is not what they are *directed* to." App. Br. 13; Reply Br. 6. Appellants argue that the Court in *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) "warned against characterizing a claim as abstract based on a mere *relationship* or *involvement* with an abstract idea" and emphasized that "improvements to computer-related technology are **not** inherently abstract." Reply Br. 3–4. Appellants argue the Examiner's analysis fails to consider the full meaning of the language of the claims that are directed to "how *a computer automatically determines* how to determine products and keywords that relate to popular online content so that more relevant advertisements can be displayed (claims 1–11 and 20–27) or using a computer, how to automatically determine better keywords (claims 12–19)." *Id*. at 6; *see also* at 4.

Regarding step one of *Alice*, we agree with Appellants that *Enfish* held that the "directed to" inquiry asks not whether "the claims *involve* a patent-ineligible concept," but instead whether, "considered in light of the specification, . . . 'their character as a whole is directed to excluded subject matter.'" *Enfish*, 822 F.3d at 1335. Regarding improvements to computer-related technology, the Court in *Enfish* held as follows:

> We do not read *Alice* to broadly hold that all improvements in computer-related technology are inherently abstract and, therefore, must be considered at step two. Indeed, some

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improvements in computer-related technology when appropriately claimed are undoubtedly not abstract, such as a chip architecture, an LED display, and the like. Nor do we think that claims directed to software, as opposed to hardware, are inherently abstract and therefore only properly analyzed at the second step of the *Alice* analysis. Software can make non-abstract improvements to computer technology just as hardware improvements can, and sometimes the improvements can be accomplished through either route. We thus see no reason to conclude that all claims directed to improvements in computer-related technology, including those directed to software, are abstract and necessarily analyzed at the second step of *Alice*, nor do we believe that *Alice* so directs. Therefore, we find it relevant to ask whether the claims are directed to an improvement to computer functionality versus being directed to an abstract idea, even at the first step of the *Alice* analysis.

Enfish, 822 F.3d at 1335. Thus, we determine whether the claims "focus on a specific means or method that improves the relevant technology" or are "directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016).

Although we agree with the legal principles advocated by Appellants, we are not persuaded by Appellants' argument that the claims as a whole are not directed to an abstract idea. Instead, we agree with the Examiner that the claims are directed to presenting (claims 1–11 and 20–27) or making available (claims 12–19) advertisements associated with determined products or keywords. Thus, we conclude the claims are drawn to little more than automating the abstract idea of presenting or making available advertisements, which we conclude is a fundamental economic practice and, therefore, constitutes patent-ineligible subject matter. *See Alice*, 134 S. Ct. at 2357; *Bilski v. Kappos*, 561 U.S. 593, 611 (2010); *Enfish*, 822 F.3d at

1335 ("fundamental economic and conventional business practices are often found to be abstract ideas, even if performed on a computer"). Specifically, we agree with the Examiner because the numerous claim limitations recite generally "determining," "automatically determining," and "through semantic analysis," but do not recite details of any alleged improvements. Thus, we find the claims are not directed to an improvement to computer functionality, but are directed to an abstract idea.

Regarding step two of *Alice*, Appellants argue that the independent claims recite "significantly more" than any alleged abstract ideas because they go beyond conventional computer operations and improve the technology area of electronic advertising. App. Br. 16–18. Appellants argue "there is plenty of detail in the claim[s]" to show "significantly more" and the recited operations are not conventional, but specific operations. Reply Br. 7–10. We are not persuaded by Appellants' arguments. Although the claims recite multiple computer operations, they do not provide details of how these operations are performed and, therefore, they do not go beyond conventional computer operations or affect electronic advertising technology. In other words, we are not persuaded that the operations in the claims are an improvement to any technology as opposed to an improvement to a fundamental economic practice.

As the Examiner finds, and we agree, the claims merely recite a computing system or computer processor to perform generic functions of determining, associating, and generating data. *See* Ans. 12. Given that the claims are directed to the fundamental economic practice of presenting or making available advertisements associated with products or keywords, the claimed elements of a generic "computing system" or "computer processor"

are not enough to transform the abstract idea into a patent-eligible invention. *See Alice*, 134 S. Ct. at 2358. Considering the claims elements individually and as an ordered combination, the claims do no more than simply instruct the practitioner to implement the abstract idea on a generic computer or processer. *Id.* at 2359; *Dealertrack, Inc. v. Huber*, 674 F.3d 1315, 1333–34 (Fed. Cir. 2012) ("Simply adding a 'computer aided' limitation to a claim covering an abstract concept, without more, is insufficient to render [a] claim patent eligible.").

Finally, we are not persuaded by Appellants' arguments that the claims do not preempt others "from using an ad server or other mechanism to serve advertisements for online content or to determining advertising to display that relates to online content." App. Br. 14; *see also* App. Br. 17. Preemption is not a separate test, but is inherently addressed within the *Alice* framework. *See Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015) ("While preemption may signal patent ineligible subject matter, the absence of complete preemption does not demonstrate patent eligibility.").

Accordingly, we sustain the Examiner's rejection under 35 U.S.C. § 101 of independent claims 1, 10, 12, 18, 20, and 28. We also sustain the rejection of dependent claims 2–9, 11, 13–17, 19, 21–27, and 29, which are not argued separately, except based on their dependence on each respective independent claim.

Rejection of Claims 1–11 and 20–29 under § 103

Regarding independent claims 1, 10, 20, and 28, Appellants argue Scholl does not teach or suggest "determin[ing] whether items to be advertised are products or not and then doing different actions as . . . [recited

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in the claims] depending upon an outcome of such a test." App. Br. 20–21, 24–25 (emphasis omitted). The Examiner "disagrees that the claim performs different actions depending upon [the] outcome of the determining" because "[i]n both cases the system determines keywords since the products, entities, and faces are also keywords." Ans. 13 (citing Spec. ¶¶ 22, 28, Appendix B, C). The Examiner also finds Appellants' Specification does not disclose "determine *whether an entity or item is a product or is not a product.*" *Id.* The Examiner further finds "Scholl teaches identifying (recognizing) a term for placing advertisements" for items, such as a Harry Potter book. *Id.* at 14.

We are persuaded by Appellants' arguments that the Examiner has erred. First, we agree with Appellants' argument that the "determining" test of the claims at issue does have meaning because "[a]lthough it may be true that a product <u>name</u> may be a keyword, this does not imply that products are keywords or that all keywords are products, entities, or even facets." Reply Br. 13. Second, for the reasons argued by Appellants, we agree with Appellants' arguments that there is support in the Specification for "determin[ing] whether an entity or item is a product or is not a product." Reply Br. 14–16 (citing original claim 1; Spec. ¶¶ 16, 47, 49). In that regard, the original language of claim 1 recites "determining a particular entity" and "*when* the particular entity *is not a product . . .*" and "*when* the particular entity *is a product . . . .*" *Id.* at 15. We agree with Appellants' argument that "one of skill in the art will understand that the 'when clauses' in claim 1 prior to amendment required a determination of whether the particular entity is a product or is not a product." *Id.* Third, for the reasons argued by Appellants, we also agree with Appellants' arguments that the portions of Scholl cited by the Examiner (2:1–3:61), which relate to

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selecting advertisements for a Harry Potter book, do not teach the "determining" test at issue.

Thus, we do not sustain the Examiner's rejections of independent claims 1, 10, 20, and 28, as well as dependent claims 2–9, 11, 21–27, and 29.

Rejection of Claims 12–17 under § 103(a)

Claims 12–17 are rejected under § 103(a) for obviousness over Zeng, Yoo, and Chang.[3] Appellants argue that Zeng fails to teach or suggest "a **semantic keyword recommender** configured . . . to: *automatically determine one or more **entities** related to the received **product indications***," as recited in independent claim 12. App. Br. 22. According to Appellants, the suggested terms in Zeng at Table 1, which is cited by the Examiner, "are not the result of any determinations of entities and categories/facets." *Id.* We are not persuaded by Appellants' arguments.

Instead we agree with the Examiner's finding that Zeng teaches a semantic keyword recommender, as Zeng teaches "systems and methods mine search engine results for term/phrases that are semantically related to an end-user (e.g., Web site promoter, advertiser, etc.) submitted terms/phrases." Final Act. 5 (citing Zeng ¶ 16). The Examiner also finds, and we agree, that Zeng teaches or suggests "terms/phrases [including entities such as Hotmail, Yahoo, usps] determined to be related to the received term/phrase 108 (example [product] mail)." Ans. 16 (*see* Zeng ¶ 25 Table 1). Thus, we agree with the Examiner's finding that Zeng teaches or at least suggests "a semantic keyword recommender configured . . . to:

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[3] *See* third-stated ground of rejection above.

automatically determine one or more entities related to the received product indications." Accordingly, we sustain the Examiner's rejection of claim 12, as well as dependent claims 13–17, which are not separately argued.

Rejection of Claims 18 and 19 under § 103(a)

Claims 18 and 19 are rejected under § 103(a) for obviousness over Scholl and Yoo.[4] Appellants argue that Scholl does not teach or suggest "semantic analysis of online content," as recited in claim 18's limitation of "automatically determining one or more entities related to the received product indications by semantic analysis of online content and generate a scored list of one or more entities for use as keywords." App. Br. 23. According to Appellants, "[t]here is nothing in Scholl that teaches, discloses, suggests, or motivates 'semantic analysis of online content' for anything let alone determining entities that relate to received product indications." *Id.* Appellants argue that the term "semantic analysis" is a term of art as used in natural language processing and Appellants' Specification. Reply Br. 10. Appellants argue that paragraph 19 of the Specification "describes how semantic analysis is different than mere pattern matching (which is used in the references cited by the Examiner)." *Id.* at 11. Appellants also argue that, although the Examiner cites one definition for semantic analysis, stating "semantic analysis is the *process of relating syntactic structures . . .,*" the Examiner fails to follow this definition, as there is nothing in the Examiner's "analysis of Rao and Scholl that show that they relate syntactic structures to provide meaning." *Id.* at 12.

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[4] *See* the fourth-stated ground of rejection above.

We are not persuaded by Appellants' arguments that the Examiner erred. First, we are not persuaded that the broadest reasonable interpretation of the term "semantic analysis" excludes pattern matching, as Appellants argue. Appellants quote paragraph 19 of the Specification as stating entities having two different senses can be recognized and result in determinations of related products "based upon an 'understanding' of the content / search query — not just pattern matching" and argue the semantic analysis referred to by Appellants "is not simply pattern matching as performed by Rao and Scholl." *Id.* at 11 (emphasis omitted).

However, merely because "semantic analysis" is "not just pattern matching" does not mean that semantic analysis excludes pattern matching. Appellants have not cited or referred to any linguistic texts or authorities to support their argument that "semantic analysis" is a term of art that excludes pattern matching. As the Examiner finds, paragraph 15 of the Specification states that, in some embodiments, "*semantic analysis techniques [are used] to better understand the underling content and/or to recognize products related to the content.*" Ans. 15. Thus, we agree with the Examiner's conclusion that, "in light of the specification, *semantic analysis techniques [are] applied to better understand the underlying content and/or to recognize products related to the content.*" *Id.*

Second, the Examiner finds, and we agree, "Scholl also teaches using a semantic analysis technique to understand the content and to recognize products related in the content (see col. 2 lines 23–63, col. 3 lines 19–45)." *Id.* In that regard, Scholl teaches determining one or more entities (e.g., "Hogwarts," "Fluffy," "dog," and "Hermoine") that are closely related to the

received product indication (e.g., Harry Potter book) by semantic analysis (e.g., matching). Ans. 14 (Scholl, citing col. 2, ll. 23–67).

Thus, we sustain the Examiner's rejection of claim 18, as well as the rejection of dependent claim 19, which is not separately argued.

DECISION

We affirm the Examiner's decision rejecting claims 1–29 under 35 U.S.C. § 101.

We reverse the Examiner's rejections of claims 1–11 and 20–29 under 35 U.S.C. § 103(a).

We affirm the Examiner's rejections of claims 12–19 under 35 U.S.C. § 103(a).

Because we have affirmed at least one ground of rejection with respect to each claim on appeal, the Examiner's decision is affirmed. *See* 37 C.F.R. § 41.50(a)(1).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1).

AFFIRMED